SPEC® CINT2006 Result
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Intel Corporation

Intel DH61WW motherboard (Intel Pentium G850)
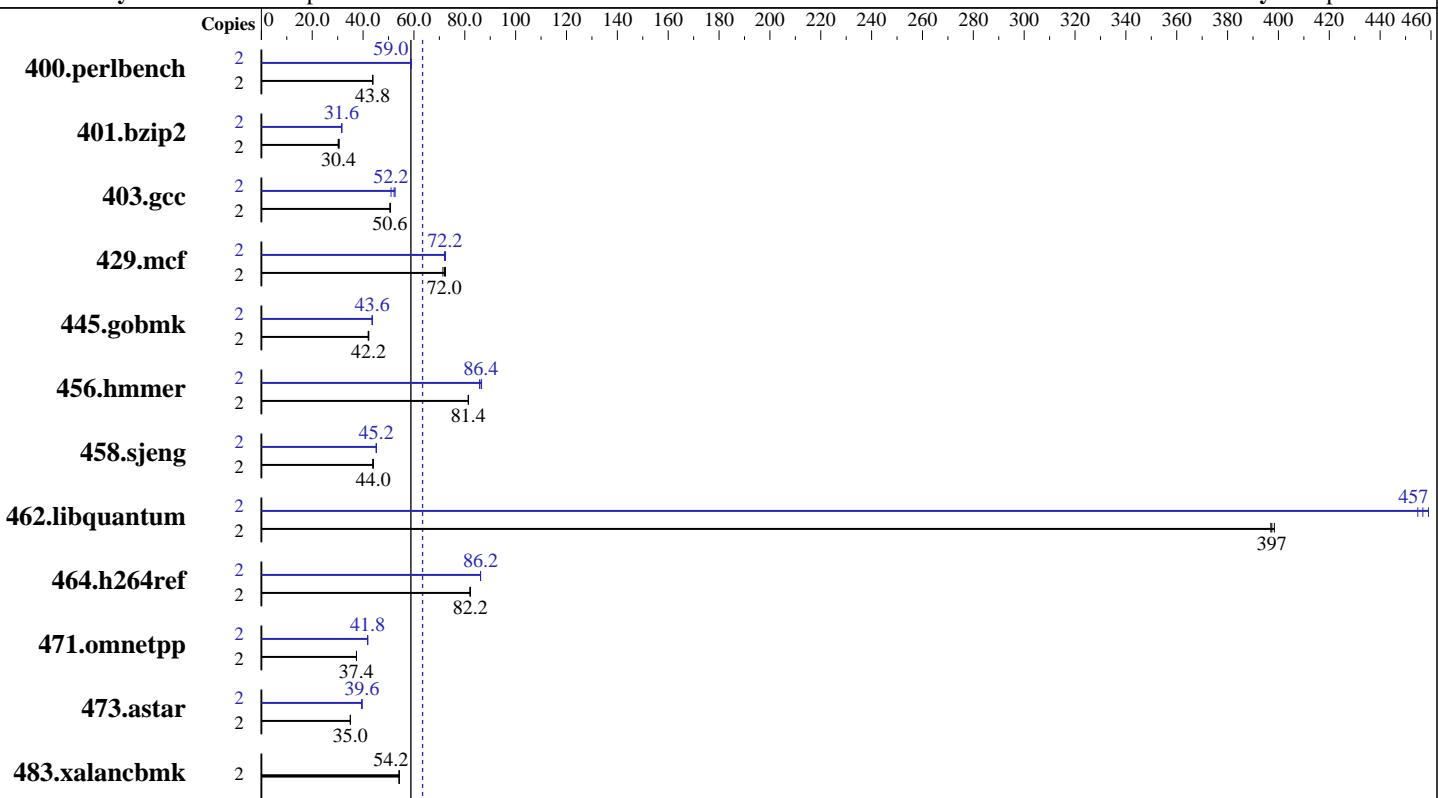
SPECint®_rate2006 = 63.4

SPECint_rate_base2006 = 58.8

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Oct-2011
Hardware Availability: May-2011
Software Availability: Apr-2011

Copies

Benchmark	Copies	Base	Peak
400.perlbench	2	43.8	59.0
401.bzip2	2	30.4	31.6
403.gcc	2	50.6	52.2
429.mcf	2	72.0	72.2
445.gobmk	2	42.2	43.6
456.hmmer	2	81.4	86.4
458.sjeng	2	44.0	45.2
462.libquantum	2	397	457
464.h264ref	2	82.2	86.2
471.omnetpp	2	37.4	41.8
473.astar	2	35.0	39.6
483.xalancbmk	2	54.2	

SPECint_rate_base2006 = 58.8

SPECint_rate2006 = 63.4

Hardware

CPU Name: Intel Pentium G850
CPU Characteristics:
CPU MHz: 2900
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 3 MB I+D on chip per chip
Other Cache: None
Memory: 4 GB (2 x 2 GB 2Rx8 PC3-10600U-9)
Disk Subsystem: Seagate 250GB HDD, 7200 rpm
Other Hardware: None

Software

Operating System: Windows 7 Ultimate SP1 (64-bit)
Compiler: C/C++: Version 12.0.3.176 of Intel C++ Studio XE for Windows;
Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
Auto Parallel: No
File System: NTFS
System State: Default
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap Library Version 9.01 from http://www.microquill.com/

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Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	2	446	43.8	**446**	**43.8**	445	43.8	2	332	58.8	**332**	**59.0**	332	59.0
401.bzip2	2	638	30.2	**636**	**30.4**	631	30.6	2	611	31.6	**610**	**31.6**	609	31.6
403.gcc	2	**318**	**50.6**	318	50.6	318	50.8	2	306	52.6	**309**	**52.2**	316	51.0
429.mcf	2	252	72.4	256	71.4	**254**	**72.0**	2	252	72.4	**253**	**72.2**	254	72.0
445.gobmk	2	499	42.0	498	42.2	**498**	**42.2**	2	481	43.6	481	43.6	**481**	**43.6**
456.hmmer	2	229	81.4	229	81.4	**229**	**81.4**	2	216	86.6	217	85.8	**216**	**86.4**
458.sjeng	2	**551**	**44.0**	551	43.8	551	44.0	2	534	45.2	535	45.2	**534**	**45.2**
462.libquantum	2	104	397	104	398	**104**	**397**	2	**90.7**	**457**	90.3	459	91.1	455
464.h264ref	2	540	82.0	539	82.2	**539**	**82.2**	2	514	86.2	513	86.2	**513**	**86.2**
471.omnetpp	2	334	37.4	**334**	**37.4**	334	37.4	2	299	41.8	299	41.8	**299**	**41.8**
473.astar	2	401	35.0	401	35.0	**401**	**35.0**	2	356	39.4	355	39.6	**355**	**39.6**
483.xalancbmk	2	255	54.2	255	54.2	**255**	**54.2**	2	255	54.2	255	54.2	**255**	**54.2**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.
The start command with the /affinity switch was used to bind processes to cores

Component Notes

Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply

Base Compiler Invocation

C benchmarks:
    icl -Qvc9 -Qstd=c99

C++ benchmarks:
    icl -Qvc9

Base Portability Flags

403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DWIN32 -DSPEC_CPU_NO_INTTYPES
483.xalancbmk: -Qoption,cpp,--no_wchar_t_keyword

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Base Optimization Flags

C benchmarks:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000
```

C++ benchmarks:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F512000000 shlW32M.lib          -link /FORCE:MULTIPLE
```

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icl -Qvc9 -Qstd=c99
```

456.hmmer: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`

458.sjeng: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`

462.libquantum: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`
`-Qstd=c99`

C++ benchmarks (except as noted below):
```
icl -Qvc9
```

473.astar: `C:/Program Files (x86)/Intel/ComposerXE-2011/bin/intel64/icl.exe`

Peak Portability Flags

403.gcc: `-DSPEC_CPU_WIN32`
456.hmmer: `-DSPEC_CPU_P64`
458.sjeng: `-DSPEC_CPU_P64`
462.libquantum: `-DSPEC_CPU_P64`
464.h264ref: `-DWIN32 -DSPEC_CPU_NO_INTTYPES`
473.astar: `-DSPEC_CPU_P64`
483.xalancbmk: `-Qoption,cpp,--no_wchar_t_keyword`

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Peak Optimization Flags

C benchmarks:

```
    400.perlbench: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                   -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
                   /F512000000 shlW32M.lib          -link /FORCE:MULTIPLE

        401.bzip2: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                   -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
                   /F512000000

          403.gcc: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                   -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

          429.mcf: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
                   /F512000000

        445.gobmk: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                   -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

       456.hmmer: -Qauto-ilp32 -QxSSE4.2(pass 2) -Qprof_gen(pass 1)
                   -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
                   /F512000000

        458.sjeng: -Qauto-ilp32 -QxSSE4.2(pass 2) -Qprof_gen(pass 1)
                   -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4
                   /F512000000

   462.libquantum: -Qauto-ilp32 -QxSSE4.2 -Qipo -O3 -Qprec-div-
                   -Qopt-prefetch /F512000000

      464.h264ref: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                   -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000
```

C++ benchmarks:

```
      471.omnetpp: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
                   -Qipo -O3 -Qprec-div- -Qansi-alias
                   -Qopt-ra-region-strategy=block /F512000000 shlW32M.lib
                             -link /FORCE:MULTIPLE

        473.astar: -Qauto-ilp32 -QxSSE4.2 -Qipo -O3 -Qprec-div-
                   -Qopt-prefetch /F512000000 shlW64M.lib
                             -link /FORCE:MULTIPLE

    483.xalancbmk: basepeak = yes
```

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Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

456.hmmer: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

458.sjeng: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

462.libquantum: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

C++ benchmarks:

473.astar: `-link -LIBPATH:C:/Program Files (x86)/Intel/ComposerXE-2011/compiler/lib/intel64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib/AMD64`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft Visual Studio 9.0/VC/lib`
`-link -LIBPATH:C:/Program Files (x86)/Microsoft SDKs/Windows/v7.0A/lib/x64`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.20111012.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-win32-revC.20111012.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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